"* * * Meteorologists have good cause for congratulation in the steady progress that is taking place.—*C. L. M.*

ANNUAL REPORT OF THE BRITISH METEOROLOGICAL COMMITTEE.[1]

[Excerpts reprinted from *Nature*, London, Oct. 21, 1920, pp. 260–261.]

The Report of the Meteorological Committee for the year ending on March 31, last, marks the end of a definite stage in the development of the British Meteorological Service. During the year under review four notable developments occurred: The Office became attached to the Air Ministry instead of being in direct connection with the Treasury; (2) the work of the British Rainfall Organization was incorporated with that of the Office; (3) the coordination of the services of the Navy, Army, and Air Force, which developed during the war, was begun; and (4) inter-Dominion and international cooperation in meteorology, which had largely been in abeyance during the war, save for military purposes, began to take a more definite shape. One might add as a fifth important occurrence that the period of service of Sir Napier Shaw as Director of the Office came to an end at the close of the year, though he consented to remain in office until the appointment of his successor was carried through.

* * * The effect of the war in bringing to light the value of meteorological information is well gauged by the increase of the *personnel* of the Office. In 1914 the Staff of the Office comprised about 20 professional and 60 clerical and technical assistants, while on March 31, 1920, the establishment was 97 professional staff and 278 clerical and technical staff.

The inter-Dominion and international arrangements are still far from being stabilized, but one of the most important developments was a Conference of Dominion meteorologists, which concluded with the following resolution: "That this conference of representative meteorologists of the British Empire assembled together for the first time agree to continue as an association for the exchange of their views from time to time by correspondence upon scientific matters concerning the achievements, requirements, and organization of their services, and hereby elect Sir Napier Shaw their first president, and invite the members to submit rules for the guidance and acceptance of the association."

This conference had been preceded by the international meeting in Brussels of representatives of the scientific academies of the Allies, at which meteorology was amongst the subjects considered. A Geodetic and Geophysical Union was set up, one of its branches being meteorology with Sir Napier Shaw as chairman and Dr. Marvin (of the U. S. Weather Bureau) as secretary. A meeting in Paris followed, summoned by the French Government, at which a new international committee was appointed, with Sir Napier Shaw as president, in continuation of the old committee. A further complication arises out of the convention relating to aerial navigation, which formed part of the work of the Peace Conference, and by Annexe G regulates "the collection and dissemination of statistical, current, and special meteorological information."

What shape international cooperation may ultimately take is sufficiently obscure, but it is satisfactory to know that Sir Napier Shaw, who has been responsible for so great a development in the past, is to continue to act as president of the new International Committee.—*E. M. W.*

[1] Fifteenth Annual Report of the Meteorological Committee to the Lords Commissioners of His Majesty's Treasury for the Year ended March 31, 1920. Pp. 88. (Cmd. 948) (London: H. M. Stationery Office, 1920.) Price 9d. net.

ANNUAL REPORT OF THE CHIEF OF THE WEATHER BUREAU, 1919–20.

The Weather Bureau is still suffering from the ravages of war and the consequences of a great change in economic conditions. The rehabilitation of the service is now a most urgent need.

The forecast service, in addition to its usual routine, issued special weather forecasts for the Army and Navy balloon race, which started from St. Louis, September 25, 1919; the recruiting tour of the NC–4, which began in September, 1919, and lasted for several months; the trans-continental reliability aeroplane race, which began October 7, 1919. In July, 1919, a new form of forecasts, known as "Flying weather" was begun at the request of the War Department. Later this service was extended to the Post Office Department as an aid to the mail-route aviators.

In order to show the verification of the forecasts, a table is given in the Report. This table covers the five years, 1915–1919, inclusive, for each of the five forecast districts into which the United States is divided, and shows the percentage of verification of the a. m. 36-hour weather and temperature forecasts.[1]

Throughout the year cooperation with the Army and the Navy meteorological services has been not only maintained, but has been rendered considerably more effective than heretofore.

Owing to the growing importance of marine meteorology, the marine section of the Climatological Division of the Bureau was organized into a separate division on April 1, 1920.

The Report also contains information on the Bureau's work in the growing highway weather service, weather maps, river and flood warnings, mountain snowfall measurements, fruit frost-work, solar radiation investigations, instrumentations, seismology, and volcanology.

[1] A discussion of this table, as well as extensive excerpts from the report, appears in the Bulletin of the American Meteorological Society for November ,1920 ,pp. 127–134.

COMPOSITION OF THE ATMOSPHERE.[2]

By A. KROGH.

[Reprinted from Science Abstracts, Sect. A, Aug. 31, 1920, § 1042.]

Within the apparatus briefly described absolute determinations of CO_2, O, "N" (N + inert gases), and combustible gases may be made with an accuracy of 0.001 per cent. The percentage of combustible gases (whether hydrogen or not) is found to be below 0.0005 per cent and probably below 0.0002 per cent, much less than the commonly assumed value 0.003 per cent. "N" is very nearly constant, observed variations from the average being less than 0.003 per cent, and it is claimed that the average "N" percentage in the troposphere is a geophysical constant which can be ascertained within 0.001 per cent. Two analyses give the absolute composition at the surface as 0.030 per cent CO_2, 79.022 per cent "N" and 29.948 per cent O. In the streets of Copenhagen the CO_2 percentage is usually increased by 0.001–0.007 per cent above the normal 0.030 per cent, there being at the same time a deficit of oxygen. The author urges a thorough study, by the methods developed, of the composition of atmospheric air, including samples from great heights. The paper is printed in English.—*M. A. Giblett.*

[2] K. Danske Vidensk, Selskab. 1, No. 12, pp. 1–19, 1919.